Construct Spectrum and SDK Installation Guide for Windows

Manual Order Number: SPE451-010WIN

This document applies to Construct Spectrum and SDK Version 4.5 and to all subsequent releases.

Specifications contained herein are subject to change and these changes will be reported in subsequent release notes or new editions.

Readers' comments are welcomed. Comments may be addressed to the Documentation Department at the address on the back cover or to the following e-mail address:

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PREFACE

The *Construct Spectrum and SDK Installation Guide for Windows* describes the installation of the client components of Construct Spectrum and SDK. This preface will help you get the most benefit from this guide, as well as find other sources of information about Construct Spectrum.

The following topics are covered:

Purpose and Structure of this Documentation

This guide describes the installation of the client components of Construct Spectrum and SDK. It is intended for administrators of the PC environment. You will learn how to install the client components in your client environment.

The following table describes the information contained in Chapter 1:

Chapter	Title	Description
1	**Installing the Client Components**, page 11	Describes the installation prerequisites, as well as how to install the client components of Construct Spectrum and SDK on the Microsoft Windows 2000 or XP operating system. It also describes how to configure the runtime and web components of the SDK and how to remove client components from earlier versions. It contains a section on common post-installation problems and solutions.

Document Conventions

This guide uses the following typographical conventions:

Example	Description
Introduction	Bolded text in cross references indicates chapter and section titles.
"A"	Items within quotation marks indicate values you must enter.
Browse model, GotFocus, Enter	Mixed case text indicates names of: • Natural Construct and Construct Spectrum editors, fields, files, functions, models, panels, parameters, subsystems, variables, and dialogs • Visual Basic classes, constants, controls, dialogs, events, files, menus, methods, properties, and variables • Keys
Alt+F1	A plus sign (+) between two key names indicates that you must press the keys together to invoke a function. For example, Alt+F1 means hold down the Alt key while pressing the F1 key.
CHANGE-HISTORY	Uppercase text indicates the names of Natural command keywords, command operands, data areas, helproutines, libraries, members, parameters, programs, statements, subprograms, subroutines, user exits, and utilities.
Construct Spectrum and SDK Installation Guide for Windows, *variable name*	Italicized text indicates: • Book titles • Placeholders for information you must supply
[*variable*]	In syntax and code examples, values within square brackets indicate optional items.
{WHILE|UNTIL}	In syntax examples, values within brace brackets indicate a choice between two or more items; each item is separated by a vertical bar (|).

Other Resources

This section provides information about other resources you can use to learn more about Construct Spectrum and Natural Construct. For more information about these documents and courses, contact the nearest Software AG office or visit the website at www.softwareag.com to order documents or view course schedules and locations. You can also use the website to email questions to Customer Support.

Related Documentation

This section lists other documentation in the Construct Spectrum and Natural Construct documentation set.

Construct Spectrum SDK

- *Construct Spectrum SDK Reference*
  This guide is for developers creating Natural modules and ActiveX Business Objects to support applications that will run in the Natural mainframe environment and a Windows environment and/or an internet server.
- *Construct Spectrum SDK for Microsoft .NET Framework*
  This guide is for developers creating Microsoft .NET Web services to invoke Natural subprograms (business objects) over the Inter/Intranet via the W3C SOAP standard.
- *Construct Spectrum SDK for Web Applications*
  This guide is for developers creating the web components of applications. It describes how to use the Construct Spectrum wizards in Visual Basic to generate HTML templates, page handlers, and object factory entries. It also contains detailed information about customizing, debugging, deploying, and securing web applications.
- *Construct Spectrum SDK for Client/Server Applications*
  This guide is for developers creating client components for applications that will run in the Natural mainframe environment (server) and a Windows environment (client).
- *Construct Spectrum Messages*
  This documentation is for application developers, application administrators, and system administrators who want to investigate messages returned by Construct Spectrum runtime and SDK components.

Construct Spectrum

- *Construct Spectrum Reference*
  This documentation is for application developers and administrators who need quick access to information about Construct Spectrum application programming interfaces (APIs) and utilities.
- *Construct Spectrum Administration*
  This guide is for administrators who want to use the Construct Spectrum Administration subsystem to set up and manage Construct Spectrum applications.
- *Construct Spectrum and SDK Vn Release Notes*
  This document describes the new features, support requirements, and changes in this release of Construct Spectrum and Construct Spectrum SDK.
- *Construct Spectrum and SDK Installation Guide for Mainframes*
  This guide describes how to install and set up the Construct Spectrum runtime and SDK components on the mainframe.

Natural Construct

- *Natural Construct Generation*
  This documentation describes how to use the Natural Construct models to generate applications that will run in a mainframe environment.
- *Natural Construct Administration and Modeling*
  This documentation describes how to use the Administration subsystem of Natural Construct and how to create new models.
- *Natural Construct Help Text*
  This documentation describes how to create online help for applications that run on server platforms.
- *Natural Construct Getting Started Guide*
  This guide introduces new users to Natural Construct and provides step-by-step instructions to create several common processes.

Other Documentation

This section lists documents published by WH&O International:

- *Natural Construct Tips & Techniques*
  This book provides a reference of tips and techniques for developing and supporting Natural Construct applications.
- *Natural Construct Application Development User's Guide*
  This guide describes the basics of generating Natural Construct modules using the supplied models.
- *Natural Construct Study Guide*
  This guide is intended for programmers who have never used Natural Construct.

Related Courses

In addition to the documentation, the following courses are available from Software AG:

- A self-study course on Natural Construct fundamentals
- An instructor-led course on building applications with Natural Construct
- An instructor-led course on modifying the existing Natural Construct models or creating your own models

INSTALLING THE CLIENT COMPONENTS

This chapter describes the installation prerequisites for Construct Spectrum and SDK, as well as how to install the client components on a Microsoft Windows 2000 or XP operating system. These components must be installed on each PC that will be running either Construct Spectrum or applications generated using the SDKs.

This chapter also describes how to configure the runtime and web components of the SDK and how to remove client components from earlier versions. The last section describes common post-installation problems and solutions.

The following topics are covered:

Prerequisites

Construct Spectrum V4.5.1 requires the following:

- Windows 2000 or Windows XP
- EntireX V6.2.1 or higher
- Entire Net-Work V5.5.1 or EntireX configured to use TCP/IP as the network transport protocol

Depending on which software development kit (SDK) you plan to use, you also require the following:

SDK	Requirement
Client/server	• Visual Basic 6.0
Web application	• Visual Basic 6.0 (Professional or Enterprise) with Visual Studio Service Pack 3 or higher • Internet Information Services (IIS) • Internet Explorer 4.0 or higher or Netscape Navigator 4.0 or higher
Microsoft .NET	• Internet Information Services (IIS) • Microsoft .NET Framework 1.0 or 1.1 • Microsoft Visual Studio .NET (optional) • Internet Explorer 5.0 or higher for pages generated by the Web Application Builder

Description of the Client Components

The client components of Natural Construct, Construct Spectrum, and Construct Spectrum SDK are:

- Construct Spectrum runtime component
  This component contains all the files required to run Spectrum applications developed using Construct Spectrum SDK or other clients.
- Construct Windows interface (CWI)
  This component provides Natural Construct model wizards to define specifications and generate modules on the client.
- Construct Spectrum SDK for Microsoft .NET
  This component contains the framework components and add-in required to generate and develop Web services. It also contains the framework components and add-in required to generate web pages and menus for your Web services.
- Construct Spectrum SDK for web applications
  This component contains the framework components and add-in required to generate and develop web applications.
- Construct Spectrum SDK for client/server applications
  This component contains the Visual Basic framework components, add-in, and several other tools required to develop client/server applications.
- Construct Spectrum web service manager
  This component provides an interface to maintain Spectrum service manager settings from your web server.

Installing the Client Components

Before you begin, ensure the following:

- There is an appropriate amount of disk space available for the installation
- The destination directory supports long file names
- You can logon with administrative privileges

Before installing the client components, read the Readme.txt files on the installation CD-ROM for the latest information about Construct Spectrum and the SDKs.

Note: To complete the installation procedure, you must provide the location of your license file. Ensure that you know the location of this file before beginning the procedure.

➢ To begin the installation procedure:

1 Insert the software CD-ROM in the drive.
The Construct Spectrum Install wizard starts.

2 Follow the instructions displayed in the wizard windows.
The Install wizard guides you through the procedure. A succession of wizard windows are displayed, from which you can confirm settings or select options.

3 Click Finish in the last wizard window.

The client components are now installed. The next step is to configure the runtime component, web component, or both components.

Configuring the Runtime Component

The runtime component of Construct Spectrum uses the dispatch service settings defined in the Spectrum Service Manager.

➢ To configure the runtime component:

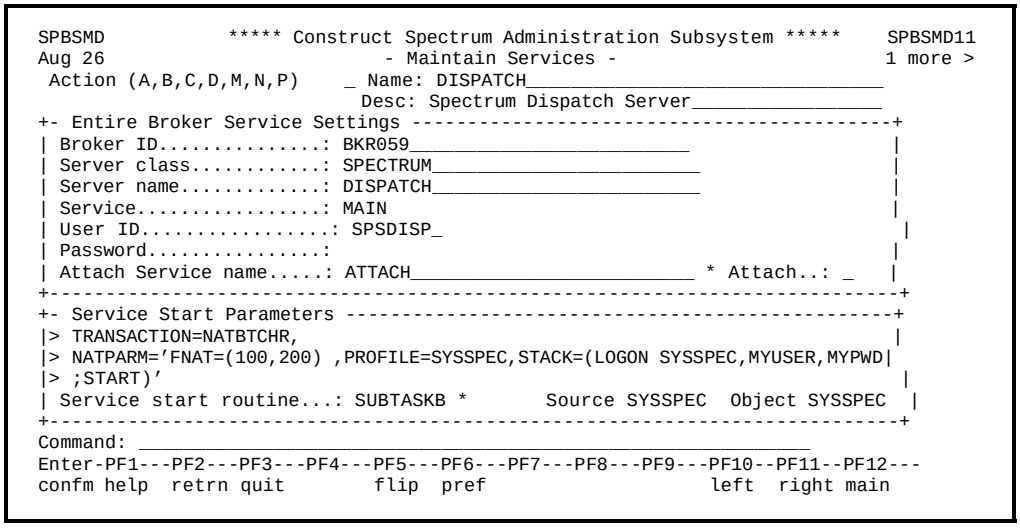
- ❑ **Step 1: Access the Entire Broker Service Settings**, page 15
- ❑ **Step 2: Specify the Entire Broker Settings on the Client**, page 16

These steps are described in detail in the following sections.

Step 1: Access the Entire Broker Service Settings

➢ To access the Entire Broker service settings:

1 Display the Maintain Services panel in the Spectrum Administration subsystem. The following example shows the Maintain Services panel for DISPATCH:



Maintain Services Panel

2 Record the Broker ID, Server class, and Server name settings.
For more information about this panel, see **Defining Construct Spectrum Services**, page 42, *Construct Spectrum Administration.*

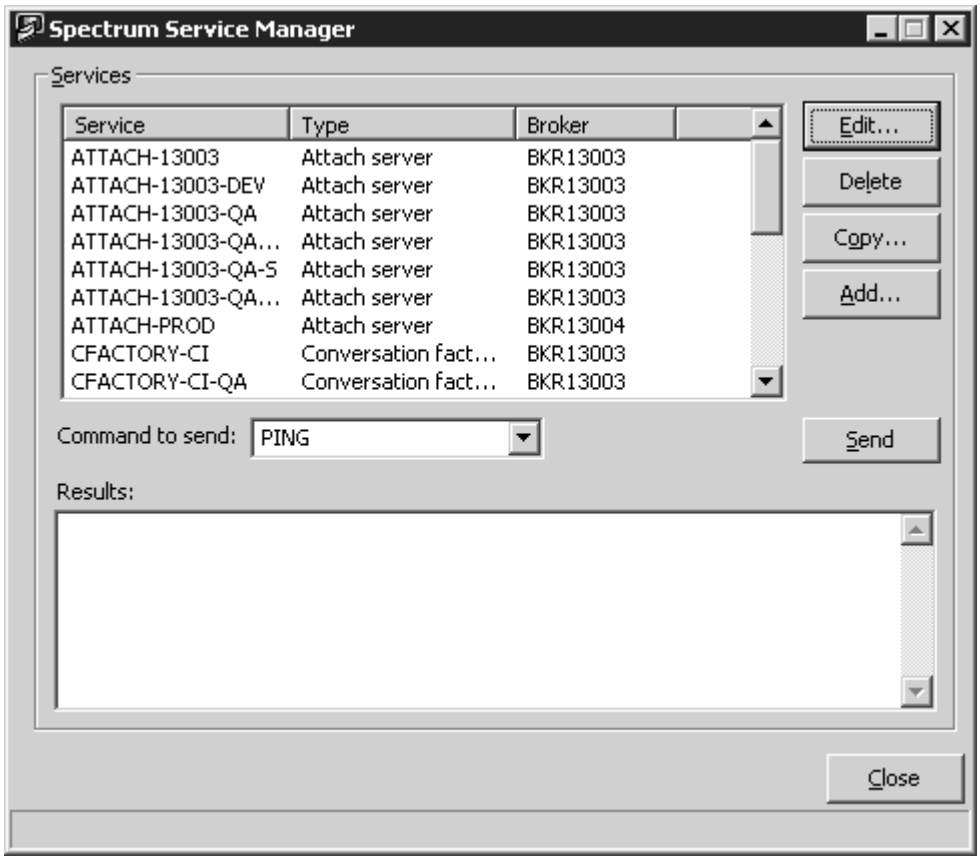
3 Press PF3 to quit.
You are now ready to configure the runtime component on the client.

Note: If you are using Entire Net-work, it must be running on your system before you can configure the runtime component.

Step 2: Specify the Entire Broker Settings on the Client

➢ To specify the Entire Broker service settings on the client:

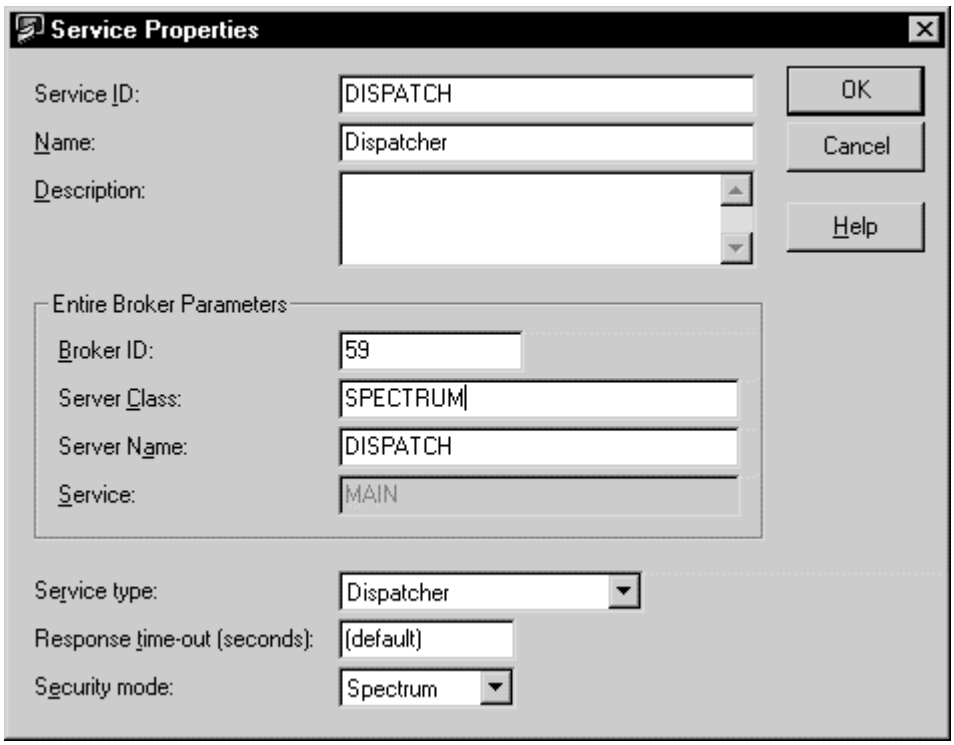
1 Start the Spectrum Service Manager.
The Spectrum Service Manager window is displayed:



Spectrum Service Manager Window

2 Select the dispatch service you want to use for your runtime environment.

3 Click Edit.
The Service Properties window is displayed:



Service Properties Window

4 Change the Broker ID to match the value displayed on the Maintain Services panel for this dispatch service.

5 Verify the Server Class and Server Name settings.

6 Click OK to save the service properties.
The Spectrum Service Manager window is redisplayed.

7 Click Send to issue the PING command.
The PING command sends a request to the dispatch service. If the communication path is working, the "PING of Service DISPATCH was successful" message is displayed.

Tip: If the communication path is not working, see **Common Installation and Post-Installation Problems**, page 21, for possible reasons.

In addition to PING, the following commands are available:

Command	Description
ENVIRONMENT	Retrieves information about the environment in which the service is running.
STEPLIBS	Lists the steplibs associated with the dispatch service.
SYSPROF	Shows current system profile (LFILE) settings.

When the ping operation completes successfully, the installation and configuration procedures are completed.

Configuring the Web and Microsoft .NET SDKs

The web and Microsoft .NET SDKs use the environment and profile settings defined in the Configuration editor.

➢ To configure the web and Microsoft .NET SDKs:

1 Access the Configuration editor.
For information on how to access and use the editor, see **Using the Configuration Editor**, page 50, *Construct Spectrum SDK Reference.*

2 Select the configuration profile.

3 Select the Settings for Profile tab.
The settings for the specified profile are displayed.

4 Verify the DBID (database identification) and FNR (file number) of the FUSER, FNAT, FDIC, FCST, FSPE1, and FSPE2 system files for your Natural environment.

5 Verify the steplib chain.

6 Save any changes to the configuration profile.

Removing Client Components for Previous Versions

While installing Construct Spectrum V4.5.1, the installation program checks for existing versions. If an existing version is detected, you are prompted to migrate your Spectrum web settings to the new version and remove the existing version. We highly recommend that you do so.

Note: Only the code frames, project templates, and configuration files are migrated. Any other information stored in the V4.3.1 or V4.4.1 folder is removed.

Common Installation and Post-Installation Problems

This section describes some of the common problems you may encounter during or after installing the client components of Construct Spectrum.

Installation Error

During installation on platforms that do not have Internet Information Server (IIS) installed, you may receive the following error message:

```
Unknown Error 1933
```

You are given the option to Abort, Retry, or Ignore. Click Ignore and the installation will continue normally.

Note: This error is due to a problem with the current installer version and will be corrected in the next release of Construct Spectrum.

Dispatch Service Errors

The following messages may be displayed when you attempt to ping the dispatch service. Each message is listed with a description of the problem and a solution.

```
SPE5500 – Unable to load a dynamic link library (library-name) required
by Spectrum. The following error occurred: error-message.
```

Description: The Entire Broker stub (which is included in Entire ACI or EntireX) was not installed correctly on the PC.

Solution: Ensure that the Entire Broker stub is installed and that its directory, and any directories it depends on, are in the Windows file search path (the PATH statement).

```
ETB02150148 – EntireX Broker not active.
```

Description: This error may occur during one of the following situations:

- The Entire Net-work Kernel is not running
- The Kernel is running, but the Entire Broker node is unreachable
- The Entire Broker node ID is incorrect
- DLLs required by the broker stub or Entire Net-work client are not in the Windows path
- There is a communication problem between the PC and mainframe

Note: By default, the Entire Net-work installation program does not add the ADALNK directory to the Windows file search path.

Solution: Depending on your situation, ensure that:

- The Entire Net-work Kernel is running
- The Entire Broker node is active (use the Entire Net-work Console program)
- The broker ID matches the broker ID in the Entire Broker attribute file and the dispatch service definition (in the Spectrum Administration subsystem)
- The root directory for Entire Net-work is in the Windows path, as well as the ADALNK directory (see the read-me file for Entire Net-work)

```
ETB00070007 – Service not registered.
```

Description: This error may occur during one of the following situations:

- The dispatch service is not running on the mainframe.
- The dispatch service is running on the mainframe, but the PC is using a different server class/server name/service combination.
- The dispatch service is not linked to an attach service that is running.

Solution: Do one of the following:

- If the dispatch service is not running, initiate it or initiate the attach service that starts the dispatcher.
- If the dispatch service is running, ensure that the server class/server name/service combination is the same.

Construct Spectrum Add-In Errors

The following messages may be displayed when you run Visual Basic and attempt to access the Construct Spectrum Add-In. Each message is listed with a description of the problem and a solution.

```
Construct Spectrum Visual Basic Add-In could not be loaded. Remove it
from the list of available Add-Ins?
```

Description: This message may be displayed after you run the Microsoft RegClean utility to clean up the Windows registry. Some versions of RegClean remove entries for the Spectrum Add-In.

Solution: Answer “No”. In an MS DOS window, issue the following command from the directory in which you installed Construct Spectrum:

```
regsvr32 cstaddin6
```

This command restores the registry entries for the Spectrum Add-In. You can now use the Visual Basic Add-In Manager to re-enable the Construct Spectrum Add-In.

```
When you attempt to access the Construct Spectrum Add-In, it is not
displayed in the list of available Add-Ins in the Visual Basic Add-In
Manager.
```

Description: Visual Basic removed the Spectrum Add-In from the list of available Add-Ins.

Solution: Edit the VBADDIN.INI file in the Windows directory (usually C:\WINDOWS or C:\WINNT) and add the following line to the [Add-Ins32] section:

```
ConstructAddIn6.Connector=0
```

Save the VBADDIN.INI file and display the Visual Basic Add-In Manager. The Construct Spectrum Add-In is displayed in the list.